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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/629,649	08/01/2000	J. Scott Carr	60256	7630

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DIGIMARC CORPORATION  
9405 SW GEMINI DRIVE  
BEAVERTON, OR 97008

EXAMINER

COUSO, YON JUNG

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/629,649

Applicant(s)

CARR ET AL.

Examiner

Yon Couso

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 6-11 and 19-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-11, 19-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/1/05.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

1. ~~Applicant's arguments filed March 1, 2005 have been fully considered but they~~  
are not persuasive.

a. The applicants argue that the Leon does not teach watermark comprising a machine readable pattern. The examiner disagrees. Leon discloses machine readable pattern, which includes watermark (column 7, line 66-column 8, line 22).

b. The applicants further argue that Leon's micro printing is too fine to be discerned by machine at column 10, line 33, therefore it is not machine readable. The examiner disagrees. The applicants' watermark can employ to prevent –outright – the photocopying or other duplication of digital postage (specification page 2, line 16-17). Is that mean the watermark taught in the present application is not machine readable? Leon's micro printing is machine readable. The fact micro printed portion bleed into solid line, duplicate would be detected easily to prevent counterfeits.

c. The applicants have noted that US Paten No. 6,345,104 (herein called '104) discloses "higher quality scanners of the sort found in most professional imaging equipment and photocopiers have resolution of 600 dpi (42 microns), 1200 dpi (21 microns), or better". The applicants conclude from this, Leon's micro printing must have a resolution of 1200 dpi or better to bleed into a solid line if xerographically copied. This is quite a distortion to what is really disclosed in the '104. '104 states that the "most inexpensive consumer scanners have a resolution of 300dpi". '104 also states that the "high quality, scanners are now available to many computer users, with 300 dpi scanners available for under \$100, and 600 dpi scanners available for marginally more". It appears from the patent relied by the applicants, the most popular and affordable

~~copier around 1998 was 300 dpi, even though higher quality was available. It is not~~  
convincing to draw conclusion that the micro printing in Leon reference must have been 1200 dpi or higher based on the material incorporated into the present application.

Pre-grant publication 20030120617 which is incorporated by reference into the Leon reference states "in a specific embodiment, the printers are specially designed printers that are used to print indicia and may be capable of printing other information such as tax stamp, secured ticket, money, and the like. One such thermal printer having a resolution of, for example, approximately 200 dots per inch."

d. The applicants argue that Leon does not teach watermark representing postage. The 102 rejection made to claim 8 has been withdrawn. Lee teaches a postage stamp having steganographically encoded thereon a digital watermark representing postage (column 5, lines 38-50, column 7, lines 34-40, and column 13, lines 65-67). Even though Lee does not teach details on an envelope having steganographically encoded thereon a digital watermark representing postage, everybody knows what the stamp is intended for. A stamp with postage will be affixed to the envelope or printed thereon. Moreover, Leon teaches a watermark printed onto an envelope (figure 4, column 4, lines 4-7, and column 7, line 66-column 8, line 22). Moreover, Leon teaches that the postage amount is one of the indicia printed onto the envelope (column 8, lines 57-65). Given the reference at the time the invention was made, it would have been obvious to one of ordinary skills in the art to incorporate postage stamp taught in Lee onto an envelope to complete the given usage of the postage stamp.

~~e. The applicant argues that there is there is no rational for the proposed~~  
combination of Zhao and Leon. The examiner disagrees. Zhao and Leon are combinable because they are both directed to techniques for protecting the security of digital representations using watermark technology. At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine Zhao with Leon to obtain the invention as specified in the claims because both references are directed to protecting the security of digital representations using watermark technology. Even though Zhao does not teach details on the document being an envelope, same technology applicable to any document would be also applicable to an envelope.

2. Claims 11, 20-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The following limitations in the claims do not have proper antecedent basis in the originally filed specification:

Claim 11, texturing of the surface of a substrate by deformation thereof.

Claim 20, the envelope also includes a franking mark, and wherein the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 1200dots per inch, or less.

Claim 21, the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 600 dots per inch, or less.

~~Claim 22, the fragile digital watermark and the franking mark are printed by the~~  
same printer, having a print resolution of 300 dots per inch, or less.

Claim 23, the watermark comprises features of another indicia on the envelope which indicia features are subtly changed to alter the local luminance or color thereof.

Claim 24, the watermark comprises a texture pattern on the envelope formed by a substrate material.

Claim 25, the plural bits of digital data represented by the watermark cannot be discerned by human inspection, even with magnification.

Claim 26, the plural bits of digital data is randomized into a pattern, the pattern comprising the fragile digital watermark.

Claim 27, the fragile digital watermark comprises a subtle background pattern that forms no part of any other marking on the envelope.

Claim 28, the envelope also includes a franking mark, and wherein the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 1200dots per inch, or less.

Claim 29, the watermark comprises features of another indicia on the envelope, which indicia features are subtly changed to alter the local luminance or color thereof.

Claim 30, the watermark comprises a texture pattern on the envelope formed by a substrate material.

Claim 31, the plural bits of digital data represented by the watermark cannot be discerned by human inspection, even with magnification.

~~Claim 32, the plural bits of digital data is randomized into a pattern, the pattern~~  
comprising the fragile digital watermark.

Claim 33, the fragile digital watermark comprises a subtle background pattern that forms no part of any other marking on the envelope.

Please provide the support from the originally filed specification or cancel the newly added or amended portions.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 6-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6-11 of copending Application No. 09/567405 (herein called '405). Although the conflicting claims are not identical, they are not patentably distinct from each other because

'405 teaches an envelope having encoded thereon a fragile digital watermark representing bits of data, the watermark being designed to evidence reproduction by scanning and printing (claim 6). Even though '405 does not details on the watermark comprising a machine-readable pattern, it would have been obvious to one of ordinary

skill in the art that the digital watermark taught in '405 would be machine-readable. A fragile digital watermark by definition is one designed to evidence the scanning/printing operations associated with reproduction, such as photocopying or PC based scanning and printing. In order to carry out the function described above, the watermark has to be machine-readable.

'405 teaches an envelope having encoded thereon a machine-readable indicia that indicates, to suitably equipped device, that image data corresponding to the envelope should not be reproduced (claim 7). '405 additionally includes "the envelope having a structure adapted to provide an enclosure for mail" which is nothing more than a definition for envelope. It would have been obvious to any one of ordinary skill in the art that the envelope is having a structure adapted to provide an enclosure for mail, with and without the detailed description of what physical envelope is.

'405 teaches an envelope having steganographically encoded thereon a digital watermark representing postage (claim 8). '405 additionally includes "the digital watermark representing plural bits of digital data but not presenting any human-apparent evidence of any data representation". Again, these are limited to definition of what is already recited. Digital watermark is plural bits of digital data and steganographically encoded is not presenting any human-apparent evidence of any data representation.

'405 teaches the steganographic encoding takes the form of printing on the envelope (claim 9).



~~'405 teaches the printing is with ink designed for sensing in the ultraviolet or~~  
infrared spectra (claim 10).

'405 teaches the encoding takes the form of texturing of the surface of a substrate by deformation thereof (claim 11).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim 19 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 19 of copending Application No. 09/567405 ('405). This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claims 6, 19, 20-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Leon (US Patent No. 6,701,304).

As for claim 6, Leon teaches an envelope having encoded thereon a fragile digital watermark representing plural bits of digital data (column 2, lines 21-46 and column 7, line 66-column 8, line 22), the watermark being designated to evidence reproduction by scanning and printing (column 10, lines 31-32).

As for claim 19, Leon teaches an envelope having formed thereon two machine readable indicia, a first of the indicia being a franking mark applied by a first party (412 and/or 414 in figure 4), the second of the indicia conveying data associated with an authorized user of the envelope (418 in figure 4), the first and second indicia cooperating to confirm that use of the envelope by the first party is authorized (column 10, line 43-column 11, line 21 and column 12, line 30-column 13, line 53).

As to claim 20, Leon teaches the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 1200dots per inch, or less (column 6, lines 27-47 and column 10, lines 34-42).

As to claim 21, Leon teaches the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 600 dots per inch, or less (column 6, lines 27-47 and column 10, lines 34-42).

As per claim 22, Leon teaches the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 300 dots per inch, or less (column 6, lines 27-47 and column 10, lines 34-42).

As per claim 23, Leon teaches the watermark comprising features of another indicia on the envelope, which indicia features are subtly changed to alter the local luminance or color thereof (column 9, lines 14-40).

As per claim 24, Leon teaches the watermark comprises a texture pattern on the envelope formed by a substrate material (column 9, lines 41-52).

As per claim 25, Leon teaches the plural bits of digital data represented by the watermark cannot be discerned by human inspection, even with magnification (column 10, lines 60-64).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6 and 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adler et al (US Patent No. 6,275,599) in view of Leon.

~~As for claim 6, Adler teaches an image having encoded thereon a fragile digital~~  
watermark representing plural bits of digital, the watermark being designated to  
evidence reproduction by scanning and printing (column 1, lines 23-26; reproduction is  
considered altering). Even though Adler does not teach details on the image being on  
an envelope, Leon discloses an envelope having encoded thereon a fragile digital  
watermark representing plural bits of digital data (column 2, lines 21-46 and column 7,  
line 66-column 8, line 22), the watermark being designated to evidence reproduction by  
scanning and printing (column 10, lines 31-32). Adler and Leon are combinable  
because they are both directed to techniques for protecting the security of digital  
representations using watermark technology. At the time of the invention, it would have  
been obvious to one of ordinary skill in the art to combine Adler with Leon to obtain the  
invention as specified in the claims.

As to claim 20, Leon teaches the fragile digital watermark and the franking mark  
are printed by the same printer, having a print resolution of 1200dots per inch, or less  
(column 6, lines 27-47 and column 10, lines 34-42).

As to claim 21, Leon teaches the fragile digital watermark and the franking mark  
are printed by the same printer, having a print resolution of 600 dots per inch, or less  
(column 6, lines 27-47 and column 10, lines 34-42).

As per claim 22, Leon teaches the fragile digital watermark and the franking mark  
are printed by the same printer, having a print resolution of 300 dots per inch, or less  
(column 6, lines 27-47 and column 10, lines 34-42).

As per claim 23, Leon teaches the watermark comprising features of another indicia on the envelope, which indicia features are subtly changed to alter the local luminance or color thereof (column 9, lines 14-40).

As per claim 24, Leon teaches the watermark comprises a texture pattern on the envelope formed by a substrate material (column 9, lines 41-52).

As per claim 25, Leon teaches the plural bits of digital data represented by the watermark cannot be discerned by human inspection, even with magnification (column 10, lines 60-64).

As per claim 26, Adler teaches the plural bits of digital data are randomized into a pattern, the pattern comprising the fragile digital watermark (column 3, lines 60-67).

7. Claims 6 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coppersmith et al (US Patent No. 6,256,736) in view of Leon (US Patent No. 6,701,304).

As for claim 6, Coppersmith teaches an image having encoded thereon a fragile digital watermark representing plural bits of digital data, the watermark being designated to evidence reproduction by scanning and printing (column 1, lines 24-30; reproduction is considered modification). Even though Coppersmith does not teach details on the image being on an envelope, Leon discloses an envelope having encoded thereon a fragile digital watermark representing plural bits of digital data (column 2, lines 21-46 and column 7, line 66-column 8, line 22), the watermark being designated to evidence reproduction by scanning and printing (column 10, lines 31-32). Coppersmith and Leon are combinable because they are both directed to techniques for protecting the security

of digital representations using watermark technology. At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine Coopersmith with Leon to obtain the invention as specified in the claims.

As to claim 20, Leon teaches the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 1200 dots per inch, or less (column 6, lines 27-47 and column 10, lines 34-42).

As to claim 21, Leon teaches the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 600 dots per inch, or less (column 6, lines 27-47 and column 10, lines 34-42).

As per claim 22, Leon teaches the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 300 dots per inch, or less (column 6, lines 27-47 and column 10, lines 34-42).

As per claim 23, Leon teaches the watermark comprising features of another indicia on the envelope, which indicia features are subtly changed to alter the local luminance or color thereof (column 9, lines 14-40).

As per claim 24, Leon teaches the watermark comprises a texture pattern on the envelope formed by a substrate material (column 9, lines 41-52).

As per claim 25, Leon teaches the plural bits of digital data represented by the watermark cannot be discerned by human inspection, even with magnification (column 10, lines 60-64).

8. Claims 7 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao (US Patent No. 6,754,822) in view of Leon (US Patent No. 6,701,304).

~~Zhao teaches a document having encoded thereon machine-readable indicia that~~ indicates, to suitably equipped devices, that image data corresponding to the document should not be reproduced (column 19, lines 48-57).

Even though Zhao does not specify an envelope as one of the document being processed in the system, it is clear to the one of ordinary skill in the art that the document taught in Zhao can be of any document, including envelope. Leon discloses an envelope having encoded thereon a fragile digital watermark representing plural bits of digital data (column 2, lines 21-46 and column 7, line 66-column 8, line 22), the watermark being designated to evidence reproduction by scanning and printing (column 10, lines 31-32). Zhao and Leon are combinable because they are both directed to techniques for protecting the security of digital representations using watermark technology. At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine Zhao with Leon to obtain the invention as specified in the claims.

As to claim 28, Leon teaches the envelope also includes a franking mark, and wherein the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 1200dots per inch, or less (column 6, lines 27-47 and column 10, lines 34-42).

As per claim 29, Leon teaches the watermark comprises features of another indicia on the envelope, which indicia features are subtly changed to alter the local luminance or color thereof (column 9, lines 14-40).

~~As per claim 30, Leon teaches the watermark comprises a texture pattern on the~~  
envelope formed by a substrate material (column 9, lines 41-52).

As per claim 31, Leon teaches the plural bits of digital data represented by the watermark cannot be discerned by human inspection, even with magnification (column 10, lines 60-64).

9. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao (US Patent No. 6,754,822) in view of Leon (US Patent No. 6,701,304) as applied to claim 7 above and further in view of Haitsma et al (US Patent No. 6,865,589).

Even though Zhao in view of Leon does not teach details on digital watermark comprises a subtle background pattern that forms no part of any other marking on the document, Zhao teaches digital watermark comprises a subtle background pattern (column 10, lines 56-59). However, Haitsma teaches digital watermark comprising a subtle background pattern that forms no part of any other marking on the document (column 2, lines 40-47). Given the references at the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the fragile digital watermark comprising a subtle background pattern taught in Haitsma into the Zhao in view of Leon because embedding the watermark as a background is the most common form of using the watermark technology especially when Zhao already teaches digital watermark comprises a subtle background pattern (column 10, lines 56-59).

Haitsma also teaches the plural bits of digital data are randomized into a pattern, the pattern comprising the fragile digital watermark (column 2, lines 40-47 and column 5, lines 51-55)



10. Claims 8-11 are rejected under 35 U.S.C. 103 as being obvious over Gillmm (4,934,846) in view of McDonough et al (3,928,226).

Since applicant failed to define the word steganographic in any other manner than printed/recorded, for the purpose of an art rejection this word is taken to mean that the indicia containing hidden information is printed/recorded on the envelope.

In regard to claims 8 and 9, Gilham ('846) discloses in the environment of printing postage indicia/stamps, an indicia 11, 12 that has been printed on envelope 15. Where indicia 11, 12 (second information) includes an "optically discernable" machine readable data" that includes an indication of the meter's license number (first information) and hence the: "device" used in franking said envelope", (see column 1, lines 15-19, "The franking consists of ... license number of the franking machine. '" and column 1, lines 57-62, "The data represented by the bar code ... postage value ... license number of the franking machine. ").

Further, it is noted that one of ordinary skill at the time of the invention would have readily recognized that

A) a barcode is composed of a sequence of one or more bars/symbols comprising light/dark spaces that are grouped together in a sequence to form a character sequences are grouped together to convey.

B) the process of watermarking is a process of combining first information with different second information to form a composite information where the act of combining does not visibility obstruct the second information.

C) since, either:

~~(1) the process of combining the meter's serial number with the other~~  
information and then converting the combined information into a barcode; or

(2) the process of separately converting the meter's serial number and the other information into barcodes that are then combined to form a single barcode;

as taught by Gilham ('846) would not alter the final appearance of the barcode of Gilham ('846), all that an unauthorized observer would see is the final barcode and not the actual information contained within the barcode.

D) the system of Gilham ('846) uses barcodes to convey information, although one of ordinary skill at the time of the invention could decode the barcode to obtain the sequence of alpha/numeric characters that is represented by the barcode, such a sequence of alpha/numeric characters would be meaningless to one of ordinary skill unless the skilled artisan knew the exact sequence and/or placement of the particular pieces of information contained within the sequence of alpha/numeric characters that is represented by the barcode.

Hence, the indicia barcode of Gilham ('846) that includes a barcode does contain hidden first information within other second information without altering the appearance of the second information and therefore would be recognized as steganographic encoded information on an envelope that indicates the device used to frank the envelope.

In regard to claim 10, it is well established that the post office uses fluorescent ink in postmarks and stamps, so as to identify the postmark or stamp on the envelope.

Note as evidence of this statement, the teachings of McDonough et al (3,928,226) in the environment of printing security markings, that teach that it was known in 1975, to use ultraviolet light to aid in the detection of encoded information contained in the postage indicia/stamps where the encoded information has been printed using fluorescent ink.

In regard to claim 11, since the action of printing requires the depositing of material on the surface of an item, the printing of the postage mark in Gilhnm (:846) would take the form of texturing the surface.

11. Claim 6 is rejected under 35 U.S.C. 103 as being obvious over Turho (5,635,694) in view of Tonges et al (4,175,774).

In regard to claim 6, Tuhro ('694) discloses envelope 1 with multi-bit digital data encoded in a pixel by pixel basis in cancellation mark 7 so as to prevent fraudulent copying of the mark, note fig. 4 which clearly shows that the encoded information is contained within a larger printed structure. As a skilled artisan would recognize, such an encoding of data, in a image is a fragile digital watermark, which would not be reproducible by the scanning and copying elements most photocopiers, (as evidence of this statement see the teachings of Tonges et al (4, 175,774) in the environment of preventing copying of printed security markings that teach in 1979, it was known to use dots of two different sizes when printing valuable documents where one size can be detected and copied by a photocopier and the second size is too small to be detected and copied by a photocopier.

12. Claims 7 and 28-31 are rejected under 35 U.S.C. 103 as being obvious over Gasper et al (5,919,730) in view of Leon (US Patent No. 6,701,304).

In regard to claim 7, Gasper et al. ('730) in the environment of preventing the unauthorized copying of printed documents teaches that it was known by others at the time of the invention to use dots of two different sizes when printing copy restrictive documents where if a dot of one size, i.e. microdot, is detected then a suitably equipped device/copier would recognize that the document should not be copied. Leon teaches Even though Gasper does not teach details on an envelope having encoded thereon a machine readable indicia, Leon teaches an envelope having encoded thereon a machine readable indicia (figure 4, column 2, lines 21-46, column 7, line 66-column 8, line 22, and column 8, lines 57-65). Given the reference at the time the invention was made, it would have been obvious to one of ordinary skills in the art to incorporate machine-readable indicia taught in Gasper into the Leon's envelope, which already includes watermark for preventing the unauthorized copying of printed documents.

As to claim 28, Leon teaches the envelope also includes a franking mark, and wherein the fragile digital watermark and the franking mark are printed by the same printer, having a print resolution of 1200dots per inch, or less (column 6, lines 27-47 and column 10, lines 34-42).

As per claim 29, Leon teaches the watermark comprises features of another indicia on the envelope, which indicia features are subtly changed to alter the local luminance or color thereof (column 9, lines 14-40).

As per claim 30, Leon teaches the watermark comprises a texture pattern on the envelope formed by a substrate material (column 9, lines 41-52).

As per claim 31, Leon teaches the plural bits of digital data represented by the watermark cannot be discerned by human inspection, even with magnification (column 10, lines 60-64).

13. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US Patent No. 6,786,954) in view of Leon (US Patent No. 6,701,304).

Lee teaches a postage stamp having steganographically encoded thereon a digital watermark representing postage (column 5, lines 38-50, column 7, lines 34-40, and column 13, lines 65-67). Even though Lee does not teach details on an envelope having steganographically encoded thereon a digital watermark representing postage, everybody knows what the stamp is intended for. A stamp with postage will be affixed to the envelope or printed thereon. Moreover, Leon teaches a watermark printed onto an envelope (figure 4, column 4, lines 4-7, and column 7, line 66-column 8, line 22). Moreover, Leon teaches that the postage amount is one of the indicia printed onto the envelope (column 8, lines 57-65). Given the reference at the time the invention was made, it would have been obvious to one of ordinary skills in the art to incorporate postage stamp taught in Lee onto an envelope to complete the given usage of the postage stamp.

Leon teaches that the steganographic encoding takes the form of printing on the envelope (column 8, lines 57-65, figure 4, and column 4, lines 4-7).

Lee teaches that the printing is with ink designed for sensing in the ultraviolet or infrared spectra (column 8, lines 41-53). Leon also teaches that the printing is with ink designed for sensing in the ultraviolet or infrared spectra (column 9, lines 13-40).

Lee teaches that the encoding takes the form of texturing of the surface of a substrate by deformation thereof ("pigment/dyes" taught throughout the reference).

Leon also teaches the encoding takes the form of texturing of the surface of a substrate by deformation thereof (column 9, lines 41-52).

14. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adler in view of Leon as applied to claim 6 and further in view of Haitsma et al (US Patent No. 6,865,589).

Even though Adler in view of Leon does not teach details on the fragile digital watermark comprises a subtle background pattern that forms no part of any other marking on the envelope, Adler clearly teaches the plural bits of digital data are randomized into a pattern (column 3, lines 60-67). Haitsma teaches digital watermark comprises a subtle background pattern that forms no part of any other marking on the document (column 2, lines 40-47). Given the references at the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the fragile digital watermark comprising a subtle background pattern taught in Haitsma into the Adler in view of Leon because embedding the watermark as a background is the most common form of using the watermark technology. Moreover, Adler already teaches spreading plural bits of digital data are randomized into a pattern as a watermark.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (571) 272-7448. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

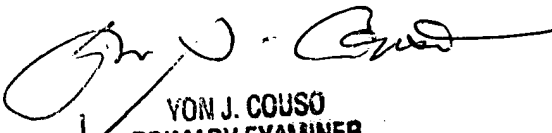
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 (effective July 15, 2005, fax number changes to 571-273-8300).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YJC

July 13, 2005



YON J. COUSO  
PRIMARY EXAMINER